y   Power User

A4000/A5000 BEAT CHANGE DEMO

Demo: Beat Change Effect

Using what we learned from Demos 1 and 2, let's dig into the Beat Change effect. This effect allows you to independently control the tempo and pitch of sampled loops. Of course, the A-series does time compression and expansion with accurate BPM and pitch settings but this special effect is a quick and easy alternative that can be used in **real time**. This is particularly useful when you need to match the tempo of some outside source, such as a turntable or tape. This tutorial will even show you a trick on how to accurately find the tempo of unknown source material.

1. **Select your sample loop via the "PLAY-SmpSel" Sample Select page.**
2. **Press the [PLAY], [F4] EFFECT, EfSetup screen. Choose the BEAT CHANGE effect #007 for processor 1. Turn KNOB #2 to select the Beat Change algorithm.**

To view edit parameters: use Knob 1 to select the PLAY-EfEdit screen.

Parameters:
Beat Change (Ctrl) — effects the tempo directly or you can leave this parameter set at 0 if using a MIDI controller to change the beat.
Beat Range – amount of overall tempo change (playback speed). If you need finer tempo resolution use a lower number.
Pitch Change (Ctrl) — effects the pitch directly or you can leave this parameter set at 0 when assigning a MIDI controller to make the changes
Pitch Range – amount of overall pitch change. If a coarser resolution is needed, use a higher number.
Accuracy Type – weights the result toward sonic or rhythmic accuracy. Set to your taste.
EQ Frequency — 100Hz-10.0kHz
EQ Gain - +/-12dB
EQ Width — 1.0-12.0 (wide to narrow)

Dry/Wet Balance – keep totally Wet for full effect or mix in some Dry signal to create a harmony part. Great on individual vocals to produce harmonies

You can assign the Beat Change control to any physical MIDI controller or to an A-series front panel knob via a control change assignment [F6].

Q: When using the Beat Change effect you do not get a BPM read-out like you do when you use the RESAMPLE command, how can you know what the new tempo is?
You can use this trick to figure the actual tempo when using the Beat Change effect. Route the output of the Beat Change Effect into the input of the next processor set to effect algorithm #88 Tempo Delay. Chaining effects is accomplished by turning Knob 4 on the EfSetup screen. You can use the Tempo Delay effect to determine the new tempo created by the Beat Change effect. Here's how:

When the loop is triggered you will hear repeats that are out of tempo with the basic loop. The Tempo Delay effect bases its BPM on the setting of the Programmable LFO found on the [PLAY], [CONTROL] PgmLFO page. On this page set SYNC to MANUAL and use Knob 4 to increment the tempo until the repeats are exactly in step with the groove. When they are in time you are at the tempo shown (or, worse case, a multiple of it). The Tempo Delay, Delay Time parameter can be set to musical timing values. These parameters are found on the [F4] EFFECT-EfEdit screen. Use Knob 2 to select Ef-2: Tempo Delay parameters. Try [¼note X 2] or half-note – this way the snare hits on beats 2 and 4 will line up when the loop is in time. When you have accurately aligned them you can choose to use the Tempo Delay effect or reassign it as to your taste.